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A NEW SUBSPECIES OF GOPHER FROG (*RANA CAPITO* LECONTE)

By Albert Schwartz and Julian R. Harrison, III

The Charleston Museum
Charleston 16, S. C.

The first record of the occurrence of *Rana capito* LeConte outside of the states of Florida and Georgia is that of Deckert (1920:26) who reported the taking of a specimen of the gopher frog near Pinelands, Hampton County, South Carolina. Chamberlain (1939:28) suggested that this record may actually refer to Pineland, Jasper County; Pineland lies approximately three miles south of the Hampton-Jasper county line in the latter county. The first North Carolina specimen was taken by Brandt (1936:220) in Beaufort County; gopher frogs were heard calling, and were observed in the Beaufort County region, but Brandt considered them the rarest frog of eastern North Carolina. A second North Carolina specimen was reported by Schwartz and Etheridge (1954:170), from Jones County. Two additional adults have been taken in South Carolina; both of these are from Berkeley County (Quinby and Harrison, 1956, in press). At the time that the present study was begun, there were thus only five specimens of *Rana capito* on record from localities north of the Savannah River.

Repeated attempts during the past three years to secure additional specimens of *Rana capito* from South Carolina have failed. Although tadpoles have been taken on one occasion, no calling adults or egg masses were ever encountered. On and before September 4, 1955, the coastal area of South Carolina was deluged with rain. In the vicinity of Charleston, 5.1 inches of precipitation were recorded, and ponds and borrow pits in the pine woods were flooded to a depth of as much as two feet. Low areas in the pinelands were likewise inundated. On this date, a single male gopher frog was heard calling from the edge of a borrow pit, .9 mi. N Cainhoy, Berkeley County, South Carolina, and a large chorus was heard and fifteen specimens collected in another, deeply flooded borrow pit at 6 mi. N Cainhoy, on South Carolina State Route

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41. In an effort to locate additional frogs, on September 5, 1955, a trip was made to the southwestern portion of the state, and a large chorus was encountered in flooded pine woods, 2.5 mi. S Scotia, Hampton County. This locality is about 8 miles northwest of Pineland, and thus serves to confirm Deckert's original record for South Carolina. At this locality, twenty-two specimens were collected.

The latest revision of the frogs of the *Rana areolata* group (which includes *R. capito*) is that of Goin and Netting (1940). These authors described *Rana sevosa* from eastern Louisiana, and southern Mississippi and Alabama. They did not examine the two specimens then on record from North Carolina and South Carolina, but cited the counties whence these specimens had been taken in their thorough list of localities and references to frogs of this group. We have examined Brandt's specimen from North Carolina, but have been unable to locate Deckert's individual from Jasper County. The known distribution of *Rana capito* and *Rana sevosa* remains much as it was shown by Goin and Netting, although in a later paper (1942: 259), Netting and Goin recorded an additional specimen of *R. sevosa* from east of Mobile Bay; this is the first record of this frog from the east of that embayment. Brandt (1953: 144) recorded the taking of a *R. capito* in Bleckley County, Georgia.

Superficial examination of the forty specimens now available from South Carolina and two specimens from North Carolina indicated that these frogs were distinct from *R. capito* as known to us from Florida. In order to assess the differences between the more northern material and that from Florida, we have borrowed comparative material from the following collections, and wish to express our thanks to the curators who have allowed us to borrow material in their care: Charles M. Bogert and Richard G. Zweifel, American Museum of Natural History; (AMNH); Neil D. Richmond, Carnegie Museum (CM); Edward C. Raney, Cornell University (CU); G. J. Love, Emory University Field Station (EFS); Arthur Loveridge, Museum of Comparative Zoology (MCZ); Norman E. Hartweg and William E. Duellman, Museum of Zoology, University of Michigan (UMMZ); Doris M. Cochran, United States National Museum (USNM). Dr. Cochran and Dr. Remington Kellogg have allowed us to borrow the holotypes of *Rana capito* LeConte and *Rana aesopus* Cope, and Dr. Hartweg has loaned us a series of paratypes of *R. sevosa* Goin and Netting for comparison. In addition to the material from the collections noted above, we have studied the specimens in the Charleston Museum (ChM) and in the collection of the senior author (AS). We wish also to thank John A. Quinby and Charles H. Haddock for their assistance in collecting gopher frogs in South Carolina. All measurements are in millimeters.

Rana capito stertens, subsp. nov.

Holotype.—Charleston Museum 55.146.12, an adult male, from 6 mi. N Cainhoy, Berkeley County, South Carolina; taken September 4, 1955, by Julian R. Harrison, III, John A. Quinby, and Albert Schwartz.

Paratypes.—Fourteen specimens with the same locality data as the holotype, in the following collections: AMNH 58371, 58372; USNM 137279, 137280; CM 34060, 34061; UMMZ 113415, 113416; MCZ 28414, 28415; ChM 55.146.11 (4).

Distribution.—Known only from the lower Coastal Plain in South Carolina and North Carolina, north of the Savannah River.

Diagnosis.—A gopher frog related to *Rana capito capito* from Florida and southern Georgia, but differing from that subspecies in complete absence of yellow or straw colored dorsolateral folds, dark ground color on dorsum with consequently inconspicuous dorsal spots, transversely fused dark blotches on dorsum in sacral region, dark bars on femora distinctly wider than light interspaces and less boldly delineated, heavily spotted venter, and dorsolateral folds narrower and more prominent than in *R. capito*. From *R. c. sevosa*, *R. c. stertens* differs in broader and less prominent (lower) dorsolateral folds, dorsal glandular warts closely placed so as to be almost pavement-like rather than discrete as in *R. c. sevosa*, dorsal blotches in sacral region fused to form transverse bars.

Description of holotype.—An adult male with the following measurements: snout-vent length, 83.5; head length, 30.7; head width, 35.5; femur, 36.6; tarsus, 23.2; tibia, 39.2; fourth toe, 39.2; snout to naris, 7.4; naris to eye, 5.5; internarial distance, 5.3; interocular distance, 7.5; length of eye, 10.1; diameter of tympanum, 6.3; interolecranal extent, 62.5; intergenual extent, 67.8. Coloration of type (taken immediately before preservation: all capitalized color names from Ridgway, 1912): dorsal ground color Saccardo's Umber, blotches black; warts on sides and upper jaw Saccardo's Umber; dorsolateral folds Saccardo's Umber, indistinguishable from dorsal ground color; iris black flecked with gold; hind legs dorsally Saccardo's Umber, grading quickly to Old Gold on anterior aspect, thighs Primuline Yellow on mesad apsect; throat Naples Yellow; venter Light Cadmium, grading to Buff Yellow centrally; axillae Light Cadmium; ventral surface of hind legs Apricot Yellow. After preservation, the coloration is as described above except that all yellows have become faded to a dull buff. The general aspect is of a dark frog with inconspicuous dorsal blotches, and without yellow dorsolateral folds rather than a light gray or whitish frog with dark, discrete, conspicuous dorsal blotches (as in *R. c. capito*).

The dorsolateral folds begin on the snout above the nares and continue posteriorly almost to the groin; they are heavily pitted, and not prominent, but rather are low and relatively inconspicuous. Between the dorsolateral folds, the skin is raised in a series of glandular warts, less in width than the dorsolateral folds, and almost pavement-like (*ie.*, closely approximately with little unraised skin showing free between them). Four or five rows of warts lie between the dorsolateral folds, depending upon the size of the warts, which are smaller anteriorly, and tend to be fused longitudinally from the region of the shoulders posteriorly to form a series of four longitudinally linear warts, closely appressed between the dorsolateral folds. A labial ridge begins at the angle of the jaw and progresses over the shoulder to end abruptly posterior to the insertion of the forelimb. The dorsal pattern is composed of three to four longitudinal series of black blotches, more or less discrete anteriorly, and fused transversely from the region of the sacrum posteriorly. Below the dorsolateral folds, black blotches extend ventrally to the lateral margins of the belly. The dorsal aspect of the forearms shows three irregularly defined black bars, while the upper arm has one poorly defined bar. There is a black spot at the elbow. All the bars and spots on the forelimbs are irregular in shape and the brown interspaces between the black bars have scattered black dots. The hindlimbs are likewise barred inconspicuously with black; there are four black bars on the femur, including a wide band at the groin, and four or five black bands on the tibia. These are irregularly in outline, wider than the brown interspaces (which are much stippled and mottled with black), and do not extend onto the ventral surface of the femora or tibiae respectively. The tarsus has two or three black bands on its posterior surface. These bands break up into blotches on the dorsal surface of the foot, thus giving the dorsal surface of the toes and web a mottled appearance. The concealed surface of the femur is heavily mottled and suffused with black, with two transverse bars moderately conspicuous.

The lips are brown, mottled with black. The venter is heavily pigmented with black. This ventral pigmentation is arranged as blotches from the region of the lower jaw posteriorly to the level of the forelimb and onto the ventral surface of that member. Immediately posterior to the foreclimb, on either side, are a pair of black, crescentic irregular bars, which are curved about the insertion of the forelimb. The remainder of the venter is heavily stipped, clouded, and blotched with black, the individual markings being smaller centrally and somewhat larger and more conspicuous peripherally. The ventral aspect of the thighs is mottled with black, and the same condition persists on the ventral surface of the tibiae. The line of demarcation between the brown dorsal coloration and the buff ventral color is gradual rather than sharp.

In order of decreasing size, the fingers are 3-1-2-4, and digit 1 has a well developed gray pad on its medial aspect. The fingers are only very slightly webbed. The toes are slender and not dilated at the tips; in order of decreasing size, the toes are 4-3-5-2-1. The webbing on the hindfoot is moderate; the webbing extends onto the penultimate phalanx on digits 1, 2, 3, and 5, and extends to the penultimate articulation of the fourth toe.

Variation.—Of forty-one specimens of *R. c. stertens* at hand from North Carolina and South Carolina, ten are females. Sexual differences in the *Rana areolata* group of frogs are not marked; Goin and Netting (*op. cit.*:152) noted especially that in *R. capito*, males differ from females in having enlarged forearms, a gray nuptial pad on the inner side of the first finger, and lateral vocal pouches. They also stated that male *R. capito* often have the dorsolateral folds, warts, axillae and groin marked with yellow, and that females achieved the larged size. Other than regarding color, our specimens agree well with these statements. Since *R. c. stertens* is characterized by the lack of yellow or straw-colored dorsolateral folds, it is obvious that this criterion cannot be employed to ascertain the sex of an individual, and sex of individuals was determined by dissection. Since sexual differences are not pronounced, in the following discussion of color and pattern variation, both males and females are included as a unit.

The dark dorsal coloration and absence of distinctly colored dorsolateral folds is pronounced ine the entire series. A single individual was kept alive in the laboratory for eight days; during this period, it displayed no metachrosis and we thus assume that the dark coloration of the series is the customary one for this subspecies. In all, the ground color is dark, in most individuals so dark that the dorsal black blotches are observed with difficulty. The blotches themselves are usually closely approximated to each other and roughly circular to quadrate in shape. These black blotches are not confined to the dorsal warts, but rather indescriminately lie across the warts and also encroach upon or overlie the dorsolateral folds, thereby rendering both dorsolateral folds and warts less obvious. In the sacral region, the dorsal black blotches are transversely elongate (due to the fusion of two adjacent blotches) and form a series of transverse blotches or bars. The ground color between the dorsal blotches is usually very restricted and much stippled or dotted with black.

The black bars on the thigh vary between 3 and 6; these bars are irregular in outline and conspicuously wider than the light interspaces, which are stippled and blotched with black. In some specimens the light interspaces are very restricted and almost limited to a light line between the wide black bars. The same condition applies to the tibial markings, which vary between 3 and 6. Again, these are only moderately distinct, wider than the accompanying light interspaces, and are often much broken and irregular at the edges. The entire animal gives the impression, when viewed dorsally, of a very dark frog with inconspicuously spotted dorsum and inconspicuously barred hindlimbs.

The dorsolateral folds are moderately broad and, although somewhat raised, are not so prominent as those of *R. c. sevosa* but are more prominent and narrower than those of *R. c. capito.* Thus, the dorsolateral folds are intermediate in condition between those of the remaining two subspecies, although the range of *R. c. stertens* is not intermediate between the ranges of *R. c. capito* and *R. c. sevosa.* The dorsal warts are much as those described in the type; they are usually closely approximated and broad, thereby almost filling the region between the dorsolateral folds. The warts are subcircular or elongate anteriorly, and, progressing posteriorly, become more linear and oblong, with the axis directed anteroposteriorly. Although generally discrete, the warts have a strong tendency to fuse longitudinally from the sacral region posteriorly.

The concealed surfaces of the thigh are very mottled or marbled with black, often to the exclusion of any conspicuous light areas. The mottling or marbling is often organized into one or two transverse poorly defined bars on the posterior surface of the thighs, or it may give the appearance of a continuation of the dark bars which cross the anterior and dorsal aspect of the thighs.

The venter is heavily spotted in all specimens. Anteriorly, on the throat and chest region, the dark pigmentation is usually confined to relatively large, pigmented areas, giving a mottled appearance. This mottled coloration continues onto the belly in some specimens (predominately so in females), where to the large blotches are often added minute stipples or cloudings of black, so that in extreme examples the belly is quite dark and heavily stippled and mottled with black as far posteriorly as the groin. The size of the black pigmented areas varies between individuals, and the posterior extent of the black pigmentation is likewise variable, but in almost all cases the venter is consistently more heavily pigmented than the venter of *R. c. capito.*

Comparisons.—Rana c. stertens requires little comparison with *R. c. capito* from Florida and Georgia. The new subspecies is readily differentiated from the more southern race by virtue of its darker color and more obscure dorsal blotching, absence of yellow or straw-colored dorsolateral folds, heavily spotted venter, details of barring on the thighs, fusion of dorsal blotches in the sacral region, and more warty dorsum. We have examined the holotypes of *Rana capito* LeConte (USNM 5903, presumably from Riceboro, Liberty County, Georgia) and *Rana aesopus* Cope (USNM 4743, from Micanopy, Alachua County, Florida). The latter specimen is typical of specimens from Florida, displaying, despite its small size (snout-vent length 47.1 mm.) the straw-colored dorsolateral folds typical of Floridan *R. c. capito.* The holotype of *R. capito* is an adult male (snout-vent length 80.0 mm.); this specimen presently measures 26.7 mm. smaller than LeConte's (1855:425) original measurement, a fact already commented upon by Harper (1935:79, 81). The specimen is old and faded, and little indication of its original coloration yet remains. LeConte published a plate of this specimen, and comparison of the holotype and the figure indicates that the delineation in the latter is quite accurate. Since there is no indication, either on the specimen, plate, or from LeConte's description, of yellow dorsolateral folds, it might be argued that *R. capito* LeConte is the appropriate name for the gopher frogs north of the Savannah River; Riceboro is indeed approximately 30 miles below the Savannah River in Georgia. However Wright and Wright (1949:435) described both a male and female from the Okefinokee Swamp as possessing dorsolateral folds of a ''honey yellow to mustard or buff'' color in the former and ''cream buff or tilleul buff'' in the latter. It is possible that, when further specimens from Riceboro are available, that it can be shown that the population in Liberty County is intermediate between *R. c. capito* in southern Georgia and Florida and *R. c. stertens* north of the Savannah River. We have seen no material from Georgia and Florida which agrees with our concept of *R. c. stertens* as here defined.

Superficially, *R. c. stertens* and *R. c. sevosa* resemble each other insofar as dorsal coloration and pattern are concerned. The arrangement of *R. sevosa* as a subspecies of *R. capito* follows the usage of Schmidt (1953:79). There seems to be little evidence for this arrangement; no intergrades between *R. capito* and *R. sevosa* have been reported, although, as noted above, Netting and Goin (1942) reported a gopher frog from east of Mobile Bay, which ''agrees with typical *sevosa* in morphology and ventral markings, but differs somewhat in dorsal pattern; the ground color is lighter gray, and the dark spots superimposed upon it are somewhat larger and less numerous than in the most *sevosa.* . . . It is possible that the atypical dorsal pattern of this specimen may indicate some *capito* tendencies in the population east of Mobile Bay, and that *sevosa* and *capito* may be found to intergrade somewhere in the area between Baldwin County, Alabama, and Berrien County, Georgia.'' We have had available for examination one specimen (EFS 54, an immature individual, from 1 mi. SE Emory Field Station, Baker Co., Georgia) from the intervening area. This specimen is presently in poor condition, but it appears to represent the subspecies *capito.* Baker County is approximately 60 miles due west of Berrien County, the previously western most locality for *R. c. capito* in southern Georgia.

Morphologically, *R. c. stertens* is readily distinguishable from *R. c. sevosa.* The development of the dorsal warts and the width and height of the dorsolateral folds immediately separate these two subspecies. Judging from the ten paratypes of *R. c. sevosa* which we have examined, we note that the dorsolateral folds are narrow and high in this subspecies, and on the other hand are broad and flatter in *R. c. stertens.* Although this is not a quantitative difference, it is nonetheless apparent when specimens of the two forms are compared. In *R. c. stertens,* the area between the dorsolateral folds is almost completely filled by the closely approximated dorsal warts, giving a pavement-like effect. In *R. c. sevosa,* the warts are discrete and separated from one another by intervening areas of rugose skin. The dorsal warts in *R. c. sevosa* are narrow and often quite linear. Although the posterior warts in *R. c. stertens* are often linear, they are always broader and not so highly raised. These structural features indicate to us that *R. c. stertens* is more closely related to *R. c. capito,* which occurs to the south, rather than to the western *R. c. sevosa,* which *R. c. stertens* resembles in coloration and pattern development.

Measurements taken in this study include snout-vent length, head width, and tibia length. This is in accordance with the view held by Goin and Netting (*op. cit.*:145) that these are the only measurements in anurans that can be taken with sufficient accuracy to be worth publishing. The writers also feel that fourth toe length is worthy of consideration and have accordingly included this measurement.

In *Rana c. stertens* there is a slight difference in size between males and females in all measurements except that of the fourth toe. These differences, are, however, only of one or two millimeters in magnitude, and are probably of minor importance (see Table 1). The measurements are based upon a relatively small series of specimens (ten females and twenty-nine males from South Carolina) and may have no real significance. In any case, sexual dimorphism with respect to size in *R. c. stertens* is not marked. It is apparent from Table 1 that, in *R. c. capito,* sexual dimorphism as related to snout-vent length is somewhat greater, although here again the small number of specimens must be taken into consideration. Comparisons with *R. c. sevosa* were made from figures given by Goin and Netting. It was felt that measurements taken by the writers on ten paratypes of *R. c. sevosa* from Mississippi were not adequate for comparison. On the basis of twenty-one males and twenty-nine females from Mississippi, their figures indicate that sexual dimorphism with respect to snout-vent length is even more apparent in *R. c. sevosa.* Here the difference between males and females is one of several millimeters.

Males and females of *R. c. stertens* average larger than males and females of *R. c. capito* from Georgia and North Florida. When compared with males and females of *R. c. capito* from central and southern Florida, males and females of *R. c. stertens* revealed no appreciable differences in size. *R. c. sevosa* (using Goin and Netting's figures) is closer, with respect to snout-vent length, to specimens of *R. c. capito* from Georgia and north Florida than it is to specimens of *R. c. stertens* from South Carolina or *R. c. capito* from central and southern Florida.

Three ratios were used in this study: snout-vent/head width, snout-

Table 1. Measurements (means and obsered range) of specimens of *Rana capito* from four geographic areas

Locality	*N*	*Snout-vent*	*Head length*	*Head width*	*Tibia*	*Toe 4*
Males						
South Carolina	29	83.5 (72.5-90.7)	30.5 (26.5-33.3)	35.8 (31.0-39.5)	37.4 (33.5-41.7)	36.8 (31.7-41.9)
Georgia	5	70.5 (62.4-75.5)	28.4 (26.4-31.1)	32.6 (30.0-37.3)	37.9 (34.3-41.0)	34.0 (32.5-36.6)
North Florida	32	75.7 (60.5-94.7)	29.6 (25.7-35.7)	33.7 (29.8-41.1)	37.7 (32.3-48.2)	34.9 (31.1-40.3)
Central & southern Florida	11	80.4 (67.0-94.5)	31.0 (28.9-35.8)	34.8 (31.4-40.3)	39.0 (33.1-40.3)	35.6 (32.1-41.1)
Females						
South Carlina	10	86.4 (80.2-94.5)	31.1 (28.5-33.2)	37.1 (33.0-40.2)	38.2 (35.0-41.7)	36.7 (34.0-38.4)
Georgia	5	81.2 (63.4-94.0)	31.5 (25.8-36.1)	35.8 (27.5-40.4)	41.4 (37.4-45.6)	36.6 (32.1-41.0)
North Florida	19	76.0 (58.5-88.2)	30.4 (25.0-34.8)	34.6 (27.2-40.4)	37.9 (30.7-42.4)	34.7 (29.7-38.8)
Central & southern Florida	8	86.1 (73.8-100.2)	32.1 (28.8-36.1)	36.4 (32.5-40.0)	40.1 (34.1-45.5)	37.2 (34.8-44.6)

Table 2. Ratios (means and observed range) of *Rana capito* from four geographic areas. Number of specimens as in Table 1.

Locality	snout-vent/ head width	snout-vent/ head length	snout-vent/tibia
South Carolina	2.33 (2.18-2.56)	2.75 (2.60-3.04)	2.24 (2.10-2.50)
Georgia	2.23 (1.98-2.41)	2.53 (2.26-2.71)	1.92 (1.70-2.13)
North Florida	2.24 (2.02-2.47)	2.55 (2.03-2.85)	2.02 (1.73-2.27)
Central and southern Florida	2.35 (2.03-2.63)	2.64 (2.32-2.88)	2.13 (1.79-2.34)

vent/head length, and snout-vent/tibia. Table 2 indicates the possibility of a cline with respect to the snout-vent/tibia ratio. In specimens of *R. c. capito* from central and southern Florida this ratio averages 2.13 (1.79-2.34), and 2.02 (1.73-2.27) in specimens from north Florida. In Georgia specimens of *R. c. capito*, this ratio averages 1.92 (1.70-2.13). Apparently tibia length increases slightly in size northward in the range of *R. c. capito*. There is no appreciable difference in snout-vent/head width ratios between *R. c. stertens* and *R. c. capito*. The ratio of snout-vent/head length is slightly higher in *R. c. stertens* than it is in *R. c. capito* from Georgia and North Florida. In *R. c. capito* from Central and southern Florida this ratio is closer to that of *R. c. stertens*. Goin and Netting's figures indicate that this ratio is somewhat higher in *R. c. sevosa*. With the exception of the snout-vent/tibia ratio, the values given by Goin and Netting for snout-vent/head length were higher than the values found by the writers for *R. c. capito* and *R. c. stertens*. The former ratio is higher in *R. c. stertens* than in *R. c. sevosa* (1.9-2.3; average 2.1).

Specimens examined.—One hundred and forty, as follows: *Rana c. stertens*: NORTH CAROLINA: *Beaufort Co.*, Washington, 1 (MCZ 21201); *Jones Co.*, 2.4 mi. N. Maysville, 1 (ChM 55.44.7). SOUTH CAROLINA: *Berkeley Co.*, 6 mi. N. Cainhoy, 15 (ChM 55.146.12 (holotype); AMNH 58371-2, USNM 137279-80, CM 34060-1, UMMZ 113415-6, MCZ 28414-5, ChM 55.146.11 (4), (all paratypes); 16 mi. NNE Charleston, 1 (ChM 51.28.4); 5 mi. NE Summerville, 1 (ChM 55.90.7); *Hampton Co.*, 2.5 mi. S Scotia, 22 (ChM 55.146.9). *Rana c. sevosa*: MISSISSIPPI: *Jackson Co.*, Vestry, 10 (UMMZ 71777, UMMZ 76921 (paratypes)). *Rana c. capito*: FLORIDA: *Alachua Co.*, Micanopy, 1 (USNM 4743 (type of *aesopus*)); Gainesville, 13 (UMMZ 76922, UMMZ 57771-2, CU 2158, CU 4030, AMNH 32827, AMNH 37084, AMNH 37086); near Gainesville, 1 (CM 21434); 3 mi. E Gainesville, 1 (CM 20245); "Twin Oak Pond," 1 (UMMZ 100963); no precise locality given, 1 (UMMZ 57877), 2 (AMNH 52480-1); *Charoltte Co.*, Englewood, 1 (ChM 39.277.8); *Citrus Co.*, 3 mi. W Dunnellon, 1 (CM 28457); *Duval Co.*, Dinsmore, 4 (AMNH 15979-15982); *Highlands Co.*, Archbold Biological Station, near Hicoria, 1 (AMNH 52006); *Levy Co.*, no locity given, 3 (USNM 57533-57534, USNM 57658); *Marion Co.*, Silver Springs, 2 (UMMZ 95542); Lake Kerr, 28 mi. NE Ocala, 3 (CM 9832-9834); Eureka, 13 (AMNH 5898-5899, AMNH 5925-5929, AMNH 5933-5934, 5937, AMNH 5941-5943); Seven Oaks, 1 (AMNH 2982); 20 mi. NW Umatilla near Silver Springs, 1 (AMNH 45141); no precise locality given, 1 (USNM 61062); *Nassau Co.*, 17 mi. S. Hilliard, 1 (CU 811); Little St. Mary's River, 1 (CM 23465); *Okeechobee Co.*, .5 mi. N

Okeechobee, 1 (AMNH 54346); *Orange Co.*, Orlando, 2 (UMMZ 54085, AMNH 268); *Pinellas Co.*, St. Petersburg, 2 (CU 1500); *Polk Co.*, Auburndale, 1 (USNM 59413); *Putnam Co.*, 3 (USNM 21702-21704); *Sarasota Co.* 2.2 mi. NW Englewood, 1 (UMMZ 109256); Englewood, 9 (UMMZ 109257, CM 23447); 1.6 mi. NW Englewood, 1 (AS 311); county indeterminate, Ocklawaha River, 2 (CU 1690). GEORGIA: *Baker Co.*, 1 mi. SE Emory Field Station, 1 (EFS 54); *Berrien Co.*, Nashville, 1 (USNM 11897); *Ware Co.*, Chesser's Island, Okefinokee Swamp, 9 (CU 125-128, CU 809-810, CU 812-814); *Liberty Co.*, Riceboro, 1 (USNM 5903 (type of *capito*)).

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